

established. Specimens are at hand which show that it occurs in Guadeloupe, Martinique, and St. Croix, while Grisebach* states that it is naturalized in St. Kitts, Trinidad, and Guiana.

Langlois in his Catalogue Provisoire de Plantes de la Basse-Louisiane† mentions a "*Clerodendron siphon*" as introduced at Point a la Hache, on the lower Mississippi. This is doubtless the plant that has now become so well established in southern Louisiana. Mr. Wurzlow writes that he has observed it for many years, not only in Terre Bonne Parish, where it is very common, but in other parishes of the southern part of the state. It grows along roadsides, ditch banks, and fencerows, and in cultivated ground to such an extent that it is regarded as a weed. It is distributed by seed, but after the plants are established they spread rapidly by rootstocks, forming large patches. Repeated cutting or destruction of the tops does not destroy it when it invades cultivated fields. Although frequently seen in neglected places about dwellings it is not known to be in cultivation.

Prof. R. S. Cocks, of Tulane University, writes that so far as he knows the plant was first collected in 1884 by Dr. Joor near Baton Rouge. He further states that it occurs abundantly in the vicinity of New Orleans and occurs more or less commonly throughout southeastern Louisiana, especially in alluvial soils.

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CENTRAL AMERICAN MOSSES

BY ELIZABETH GERTRUDE BRITTON AND ROBERT STATHAM WILLIAMS

1. *Campylopus filifolius* (Hornsch.) Mitt.

Guatemala: Alta Verapaz, 3330a, Maxon and Hay, 1904;
Alta Verapaz, 29, Cook and Doyle, 1905.

Costa Rica: Cartago, 506, Maxon, 1906.

2. *Campylopus subleucogaster* (C. Müll.) Jaeger.

Guatemala: Cubilquitz, 6652, H. von Turckheim, 1892.

Costa Rica: Vicinity of Coliblanco, 264, Maxon, 1906.

* Fl. Brit. W. Ind. 500. 1864.

† p. 15. 1887.

3. *Leucobryum antillarum* Sch.

Costa Rica: Coliblanco, 227a, Maxon, 1906.

4. *Syrrhopodon incompletus* Schwgr.

Syrrhopodon Hobsoni Hook. & Grev.

Syrrhopodon decolorans C. Müll.

Syrrhopodon Mohrianum C. Müll.

Syrrhopodon Sartori C. Müll.

Mexico: Liebman, Sartorius, etc.

Guatemala: Bernouille and Cario, Rio Pollochico, 3087, Maxon and Hay, 1904.

Honduras: Rio Platano, 690, Wilson, 1903.

5. *Hyophila reflexifolia* C. Müll.

Guatemala: Alta Verapaz, 411, Cook and Griggs, 1902.

6. *Macromitrium Tonduzii* Ren. and Card.

Costa Rica: La Palma, 481, Maxon, 1906.

7. *Macromitrium palmense* R. S. Williams sp. nov.

Pseudoautoicous: growing in deep tufts, the primary stems creeping, bare, the secondary erect, branching, without radicles, 5 or 6 cm. high; leaves densely imbricate, spreading, crispate in upper part; stem leaves 5 mm. long, linear-lanceolate, carinate, serrulate about one half down, smooth throughout or with a few low papillae on upper surface toward the base; excurrent costa slightly denticulate; leaf cells below long and narrow, the median in rows, about 6μ wide by 10 to 12μ long, with furrows between, or sometimes scarcely elongate in less distinct rows, the upper elongate, not in rows; perichaetial leaves a little shorter than stem leaves with longer cells above and more abruptly narrowed to the denticulate, excurrent costa; seta smooth, 1.5 to 2.5 cm. high; capsule smooth or nearly so, globose-pyriform, about 1.5 mm. high with stomata in several rows near base; lid not seen; peristome double, the outer of reddish-brown, densely papillose teeth, divided scarcely one half down, the inner of about the same height, a little paler, more or less irregularly divided; calyptra without hairs, slightly rough at apex; spores slightly rough, up to 35μ in diameter.

In habit much like *M. subcirrhosum* but with median leaf cells very different, leaf base scarcely papillose and costa distinctly excurrent.

HABITAT: On tree trunk on open moist slopes.

TYPE LOCALITY: La Palma, Costa Rica, 480, Maxon, May 6, 1906.

8. *Macromitrium cirrhosum* (Hedw.) Brid.
Guatemala: Alta Verapaz, 3125, Maxon and Hay, 1905.
9. *Pohlia falcata* (Besch.) Broth.
Guatemala: Volcan de Agua, 3706, Maxon and Hay, 1905.
10. *Acidodontium megalocarpum* (Hook.) Ren. and Card.
Guatemala: Alta Verapaz, 430, Cook and Griggs, 1902; 3290, Maxon and Hay, 1905.
11. *Rhizogonium spiniforme* (L.) Bruch.
Guatemala: Alta Verapaz, 843, Cook and Griggs, 1902.
Costa Rica: Coliblanco, 263, Cartago, 499, Maxon, 1906.
12. *Philonotis sphaerocarpa* (Sw.) Brid.
Honduras: 487, Percy Wilson, 1903.
13. *Philonotis uncinata gracilentata* (Hpe.) Dismier.
Guatemala: San Felipe, 3550, Maxon and Hay, 1905.
14. *Polytrichum antillarum* Rich.
Polytrichum vernicosum Paris.
Guatemala: Baja Verapaz, 6930, von Turckheim, 1906.
Costa Rica: Coliblanco, 231, 337, La Palma, 423, Maxon, 1906.
15. *Orthostichidium pentagonum* (Hpe. & Ltz.) C. Müll.
Costa Rica: San José, 164, Cook and Doyle, 1903.
16. *Squamidium macrocarpum* (Spruce) Broth.
Costa Rica: Santiago, 82, Maxon, 1906.
17. *Papillaria nigrescens* (Sw.) Jaeg.
Guatemala: Chilion, Bernouille, 1867.
Costa Rica: San José, 146, Cook and Doyle, 1903; 146, Maxon, 1906.
18. *Phyllogonium viscosum* (P. Beauv.) Mitt.
Costa Rica: San José, E. S. Hyde, 1888.
Coliblanco, 236, Maxon, 1906.
19. *Phyllogonium fulgens gracile* Ren. & Card.
Costa Rica: San José, E. S. Hyde, 1888; Santiago, Aman Breues, 1901.
20. *Neckera Ehrenbergii* C. Müll.
Guatemala: Volcan de Agua, 3716, Maxon and Hay, 1905.
21. *Porotrichum* sp. ? (young plants too small to name).
Costa Rica: La Palma, 384a, Maxon, 1906.
22. *Entodon stenocarpus* (Br. & Sch.) Jaeg.
Costa Rica: San José, 165, Cook and Doyle, 1903.

23. *Fabronia flavinervis* C. Müll.

Guatemala: San Felipe, 3508, 3510a, Maxon and Hay, 1905.

24. *Fabronia polycarpa* Hook.

Panama: Between Salanca and Chiquin, O. F. Cook, 1905.

25. *Pilotrichum bipinnatum* (Schwgr.) Brid.

Guatemala: Alta Verapaz, 500, Cook and Griggs, 1902.

26. *Isodrepanium* (Mitt.) E. G. Britton gen. nov. Fig. 1.



FIG. 1. *Isodrepanium lentulum* (Wils.) E. G. Britton.

Lepidopilum Sect. *Isodrepanium* Mitt. Journ. Linn. Soc. 12: 369.
1869.

Among our Jamaica collections we have fine specimens of a moss which we had difficulty in referring to any genus known to us from the West Indies and this difficulty still remains for

according to Brotherus* it cannot be a *Homalia* because the leaves have porose cells and although they are ecostate they are not entire and hence do not fit with *Euhomalia* or *Spathularia*. According to Mitten this has been described as a subgenus of *Lepidopilum* with one species *L. membranaceum* (C. M.) Mitt. characterized by its equally falcate, scythe or scimitar-shaped leaves. There is but one species, but it is listed in three genera in Paris Index, as *Homalia*, *Lepidopilum* and *Neckera*. The identity of these species has been determined by consulting type material of each and as the fruit has not been described we give the following characters:

Isodrepanium (Mitt.) E. G. Britton gen. nov.

Plants occasionally a foot long, pendent on trees. Stems slender, regularly pinnate or bipinnate, branches 1–14 cm. long. Leaves glossy, imbricate, falcate, acuminate, serrate, ecostate; cells porose. Dioicous. Seta 4 cm. long, slender, flexuose; capsule nodding-ovoid; peristome double, without cilia.

Type species: *Homalia lentula* Wils.

Isodrepanium lentulum (Wils.) E. G. Britton new combination.

Homalia lentula Wils. Ann. Mag. Nat. Hist. 20: 379. 1847.

Hookeria membranacea C. M. Syn. Musc. 2: 200. 1851.

Lepidopilum membranaceum Mitt. Journ. Linn. Soc. 12: 369. 1869.

Neckera falcifolia R. & C. Bull. Soc. Roy. Bot. Belg. 32: 184. 1893.

Homalia membranacea C. M. Hedwigia 37: 266. 1898.

Neckera lentula Broth. in E. & P. Pfl. 1³: 842. 1906.

Stems pendent, irregularly branched, reaching a maximum of 30 cm. in length with branches pinnate or bipinnate, often 10–15 cm. long; leaves glossy green, crowded, flexuose, 1.5 mm. long, falcate-acuminate, ecostate; apex recurved; margins unequally and finely serrate; base oblique, unequal, slightly auriculate on one side, basal cells yellow, enlarged, all femur-shaped and porose, with thick walls. Perichaetial leaves longer pointed, almost entire. Dioicous. Seta 4 cm. long, slender, flexuose, red; capsule 2–3 mm. long, ovoid, horizontal; peristome double, yellow; teeth trabeculate, with narrow projecting lamellae,

* E. and P. Pflanzenfam. fasc. 226: 847. 1906.

slender and papillose at apex; endostome paler, smooth, segments carinate and perforate, cilia none; walls thickened, cells small, irregularly hexagonal; spores smooth, 16–18 μ . Lid and calyptra not seen.

TYPE LOCALITY: Port Royal, Jamaica. "Mc Nab."

DISTRIBUTION: High Mountains of Jamaica, Morce's Gap, John Crow Peak, New Haven Gap and Sir John and Summit, St. Catharine's Peak; Cuba, Sierra Maestra and Mt. Torquino; Porto Rico, Luquillo Mts.; St. Vincent, H. H. Smith; Barbadoes, Parker; Trinidad, Crüger. Guatemala, Alta Vera Paz, H. von Turckheim 1149, Cook and Griggs 512, with fruit. Costa Rica, Pittier 9642; New Granada and Mt. Abitana, Andes of Quito, Spruce 740.

Funck and Schlim, 370 from Caracas, Venezuela, is not this species but a true *Homalia*.

Homalia glabella (Sw.) Mitt. with which it has been confused by Mitten also has its type locality in Jamaica but that species grows on rocks, in shade, is a smaller plant, with nearly simple branches, obtuse or shortly apiculate leaves which are shortly bicostate and without porose cells. Its distribution is from Jamaica, Porto Rico to Guadeloupe, and from Mexico and Guatemala to Costa Rica.

27. *Callicostella pallida* (Hornsch.) Jaeg.

Guatemala: Alta Verapaz, 388, Cook and Griggs, 1902.

28. *Callicostella Oerstediana* C. Müll.

Guatemala: Rio Pollochico below Panzos, 3086, Maxon and Hay, 1904.

29. *Harpophyllum aureum* (Lam.) Spruce.

Costa Rica: La Palma, 400, Maxon, 1906.

30. *Hypopterygium Tamarisci* (Sw.) Brid.

Costa Rica: Santiago, 116, Coliblanco, 338, Maxon, 1906.

31. *Helicophyllum torquatum* Brid.

Guatemala: 3538, Maxon and Hay, 1905.

32. *Rhacopilum tomentosum* (Sw.) Brid.

Rhacopilum latistipulatum Cardot

Rhacopilum angustatum Sch.; Besch.

Rhacopilum tomentosum longe-aristatum C. Müll.

Nicaragua: Volcan Mombacho, 2367, Baker, 1903.

- Guatemala: Alta Verapaz, Cook, 1905; San Felipe, 2536,
Maxon and Hay, 1905.
- Costa Rica: Santiago, 89, Maxon, 1906.
33. *Thuidium miradoricum* Jaeg.
Costa Rica: Cartago, 499a, Maxon, 1906.
34. *Mittenothamnium Langsdorfii* (Hook.) Cardot
Costa Rica: La Palma, 384, Maxon, 1906.
35. *Mittenothamnium megapalmatum* (C. Müll.) Card.
Guatemala: Alta Verapaz, 325, Maxon and Hay, 1905.
36. *Mittenothamnium nicaraguense* (Broth. ined.) E. G. B. comb.
nov.
Nicaragua: Volcan Mombacho, 2501, 2514, Baker, 1903.
37. *Mittenothamnium reptans* (Sw.) Card.
Costa Rica: Coliblanco, 339, 348, La Palma, 372, 374, Maxon,
1906.
38. *Mittenothamnium Salleanum* (Besch.) Card.
Guatemala: Godman and Salvin in Hb. Mitt.
39. *Mittenothamnium substriatum* (Mitt.) Card.
Mexico: (Found without collector or locality in Hb. Mitt.)
Det. by Max Fleischer.
40. *Ectropothecium apiculatum* (Hornsch.) Mitt.
Guatemala: Alta Verapaz, 93, 258, 383, Cook and Griggs, 1902.
Costa Rica: Finca Navarro, 619, Maxon, 1906.
41. *Ectropothecium globitheca* (C. Müll.) Mitt.
Nicaragua: Volcan Mombacho, 2368, 2520, C. F. Baker, 1903.
42. *Ectropothecium pseudo-rutilans* (C. Müll.) Paris
Nicaragua: Volcan Mombacho, 2366, C. F. Baker, 1903.
43. *Isopterygium miradoricum* (C. Müll.) Jaeg. (ex descriptio)
Guatemala: Puerto Barrios, 3072, 3076, 3078, Maxon and
Hay, 1904.
44. *Isopterygium pusillum* Ren. & Card.
Honduras: Puerto Sierra, 506, P. Wilson, 1903.
Costa Rica: La Palma, 371, Maxon, 1906.
45. *Isopterygium trichopelma* (C. Müll.) Paris
Costa Rica: Coliblanco, 250, Maxon, 1906.
46. *Taxithelium planum* (Brid.) Mitt.
Honduras: Puerto Sierra, 507, 556, P. Wilson, 1903.
Guatemala: Alta Verapaz, 3216, Maxon and Hay, 1905.

47. *Vesicularia amphibola* (Spr.) Broth.
Guatemala: Alta Verapaz, 410, Cook and Griggs, 1902.
48. *Vesicularia vesicularis* (Schwgr.) Broth.
Guatemala: Mazatenango, 3494, Maxon and Hay, 1905.
49. *Pterigonidium pulchellum* (Hook.) Broth.
Honduras: Puerto Sierra, 499, P. Wilson, 1903.
Guatemala: Puerto Barrios, 3066, Maxon and Hay, 1904.
50. *Sematophyllum caespitosum* (Sw.) Mitt.
Costa Rica: Santa Clara, 604, 611, Cook and Doyle, 1903.
51. *Sematophyllum galipense* (C. Müll.) Mitt.
Honduras: near Puerto Sierra, 290, P. Wilson, 1903.
52. *Sematophyllum Lindigii* (Hpe.) Mitt.
Costa Rica: Coliblanco, 244, 265, 336, 346, Maxon, 1906.
53. *Trichosteleum fluviale* (Mitt.) Jaeg.
Guatemala: Puerto Barrios, 3077, Maxon and Hay, 1904.
54. *Trichosteleum microcarpum* Brotherus.
Sematophyllum microcarpum Mitt. Jour. Linn. Soc. 12: 493.
1869, in part.
Nicaragua: Volcan Mombacho, 2497, C. F. Baker, 1903.
In Mitten's herbarium we find a specimen labeled *Leskea microcarpa* "fl. Ind. occ. Swartz. Hb. Hooker." This must have been a manuscript name of Swartz, because it does not occur in his *flora Indiae occidentalis*, as stated. It is evidently the type of *Sematophyllum microcarpum* Mitt. which he placed in the section *Trichosteleum* (p. 492), but it does not agree with other species of this genus, because although there are occasional small obscure papillae on a few of the young leaves, most of the leaves are entirely smooth and the specimen agrees with *Sematophyllum xylophilum* Mitt. (l. c. p. 490) to which it must be referred as a synonym.

SHORTER NOTES

WINTER CHANGES IN WEEPING WILLOW.—Since reporting the upward winter movement of the slender branches of the weeping willow tree* in front of the Columbia University Library, I have looked in vain for another tree showing the same curious phe-

* The Weeping Willow in Winter, *Torreya* 10: 38, 1910.